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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,053	09/26/2003	Rainer Bruchhaus	14580-031001	1239
20985	7590	05/05/2006	EXAMINER	
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			KIM, SU C	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,053

Applicant(s)

BRUCHHAUS ET AL.

Examiner

Su C. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/13/2006(RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,5,6,7,8,9,10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,7 and 8 is/are allowed.
- 6) ☒ Claim(s) 6,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

HSIEN-MING LEE
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

REMARK / ARGUMENT

1. In response of Final Office Action mailed on 12/13/2005, Applicant filed Requesting for Continuation of Examination (RCE) on 4/13/2006. Applicant's amendment has been entered and made of record. Now claims 1, & 3-10 are pending.

DETAILED ACTION

Claim Objections

2. Claim 3 is objected to because of the following informalities: the term " the second material " is not consistent.

The examiner suggests "the second electrically insulating material" as claimed in independent claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6, 9, & 10 are rejected under 35 U.S.C. 102(b) as being anticipating by Mori et al. (US 6384440, hereafter 'Mori')

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Although it is noted that claims 6, 9 & 10 are a product-by-process claim, product-by-process claims are directed to the product no matter how actually made. *In re Taylor*, 149 USPQ 615, 617 (CCPA 1966). Consequently, it is the patentability of the final product, and not the patentability of the process, that must be determined in a product-by-process claim. *In re Thorpe*, 227 USPQ 964, 966 (CAFC 1985), *Ex parte Edwards* 231 USPQ 981, 983 (BdPatApp&Int 1986)

3. Pertaining claims 6 & 9, Mori discloses a ferroelectric capacitor (**Column 3 & line 35-67**)

4. Pertaining claim 10, Mori discloses a FeRam memory device (**Column 5, lines 15-16**)

Allowable Subject Matter

Claims 1, 7, & 8 allowed over the prior art.

The following is an examiner's statement of reasons for allowance:

5. Pertaining claims 1, 7, & 8, the prior art fails to teach etching the ferroelectric layer and the layer of the second electrically insulating material to form isolated ferroelectric element which have exposed side surface that are substantially perpendicular to the ferroelectric layer and providing conductive layer in contact with the each side surface of ferroelectric layer and the second electrically insulating material;

Performing an annealing step to crystallize the ferroelectric material while the conductive material promoting crystallization of the ferroelectric material to a higher degree than the first and second electrically insulating materials, whereby the crystallization proceeds substantially horizontally through each of the ferroelectric element as claimed in independent claim 1.

6. Claim 3 would be allowable if rewritten to overcome the objection(s), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Claims 4 & 5 are objected to as being dependent upon a base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanaya et al.(US 20040084701)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Su C. Kim whose telephone number is (571) 272-5972.

The examiner can normally be reached on Monday - Thursday, 9:00AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Su C. Kim
4/27/2006

HSIEN-MING LEE
PRIMARY EXAMINER

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PRIMARY EXAMINER

4/27/06